CLAIMS

Sub B3 1. A fastening system for panels (3, 4, 5, 6, 22, 23, 40, 41), in particular for floor panels, whose narrow sides are provided with retaining profiles (4a, 4b, 5b, 20, 21), wherein mutually oppositely disposed retaining profiles (4a, 4b, 5b, 20, 21) of a panel (3, 4, 5, 6, 22, 23, 40, 41) match each other in such a way that similar panels (3, 4, 5, 6, 22, 23, 40, 41) can be fastened to each other, characterised in that at least one pair of oppositely disposed retaining profiles (4a, 4b, 5b, 20, 21) has complementary hook elements (4c, 4d, 24, 25) which can be hooked one into the other and that the hook elements (4c, 4d, 24, 25) have retaining surfaces (4g, 5g, 33, 34) by which the panels (3, 4, 5, 6, 22, 23, 40, 41) are held against each other in the assembled condition in such a way as to afford a gap-free floor surface.

2. A fastening system according to claim 1 characterised in that a first retaining profile (4a, 4b, 5b, 20, 21) of a panel (3, 4, 5, 6, 22, 23, 40, 41) is provided with a hook element (4c, 4d, 24, 25) formed from a leg (4e, 5e, 26, 27) which projects approximately perpendicularly from the narrow side and which is arranged at the top side of the panel, wherein arranged at the free end of the leg (4e, 5e, 26, 27) is a hook projection (4f, 5f, 28, 29) which faces towards the underside of the panel (3, 4, 5, 6, 22, 23, 40, 41), and that the second retaining profile (4a, 4b, 5b, 20, 21) of the panel (3, 4, 5, 6, 22, 23, 40, 41) which is opposite the first retaining profile is provided with a hook element (4c, 4d, 24, 25) formed from a leg (4e, 5e, 26, 27) which projects from the narrow side and which is arranged at the underside of the panel (3, 4, 5, 6, 22, 23, 40, 41), wherein arranged at the free end of said leg (4e, 5e, 26, 27) is a hook projection (4f, 5f, 28, 29) which faces towards the top side of the panel.

3. A fastening system according to claim 1 or claim 2 characterised in that the hook projection (4f, 5f, 28, 29) of the leg (4e, 5e, 26, 27) at the underside bears in the assembled condition of a panel (3, 4, 5, 6, 22, 23,

40, 41) against the leg (4e, 5e, 26, 27) at the top side of a second panel (3, 4, 5, 6, 22, 23, 40, 41) and that provided between the hook projection (4f, 5f, 28, 29) of the leg (4e, 5e, 26, 27) at the top side of the first panel (3, 4, 5, 6, 22, 23, 40, 41) and the leg (4e, 5e, 26, 27) at the underside of the second panel (3, 4, 5, 6, 22, 23, 40, 41) is clearance (L1) or vice-versa.

4. A fastening system according to one of claims 1 to 3 characterised in that the retaining surfaces (4g, 5g, 33, 34) of the hook projections (4f, 5f, 28, 29) engage behind each other in such a way that complementary hook projections (4f, 5f, 28, 29) can be hooked one into the other only by elastic deformation.

Sub B3 5. A fastening system according to claim 4 characterised in that the retaining surfaces (4g, 5g, 33, 34) of the hook projections (4f, 5f, 28, 29) are inclined, that the hook projections (4f, 5f, 28, 29) are reduced from their free ends towards the legs (4e, 5e, 26, 27) and that the retaining surfaces (4g, 5g, 33, 34) of the complementary hook projections (4f, 5f, 28, 29) bear against each other at least in a region-wise manner.

6. A fastening system according to claim 4 characterised in that clearance (L2) is provided between the end (5h) of the hook projection (5f) at the underside of the second panel (5) and the narrow side of the first panel (4) and that the end (14) of the hook projection (4f) at the top side of the first panel (4) in the assembled condition bears against the second panel (5) at least in the region of the top side of the panel.

Sub B3 7. A fastening system according to one of claims 1 to 5 characterised in that at least one of the ends (30, 35) of a hook element (24, 25) of a panel (22, 23) has at its free end a projecting detent element (31, 36) which in the assembled condition engages into an undercut recess (32, 37) of the hook element (24, 25) of the other panel (22, 23).

8. A fastening system according to claim 7 characterised in that the projecting detent element (31) of the second panel (23) is in the form of a bead which extends over the entire length of the narrow side and the undercut recess (32) of the first panel (22) is in the form of an elongate channel which receives the bead in the assembled condition.

9. A fastening system according to one of claims 3 to 6 characterised in that the intermediate spaces provided with clearance in the assembled condition of two panels (3, 4, 5, 6, 22, 23, 40, 41) form adhesive pockets.

10. A fastening system according to one of claims 1 to 10 characterised in that the retaining profiles (4a, 4b, 5b, 20, 21) of the long narrow sides are in the form of complementary positively engaging profiles (42, 43), wherein the positively engaging profile (42) of one panel (40) forms a common hinge (G) with the complementary positively engaging profile (43) of a second panel (41) in the laid condition and the hinge (G) is to be assembled by a rotary joining movement of the panels (40, 41).

11. A fastening system according to claim 11 characterised in that the hinge (G) is formed from an opening (52) in the narrow side of the second panel (41) and a matching projection (44) on the complementary narrow side of the first panel (40).

12. A fastening system according to claim 12 characterised in that the hinge (G) is formed from a concave curvature (55) in the inward wall (53) of the opening (52), which is towards the base (U), and a convex curvature (45) at the underside of the projection (44), which is towards the base (U), the top side of the projection (44) of a panel (40), which is remote from the base (U), has an inclined removal of material (51) which extends to the free end of the projection (44), the thickness of the projection (44) is increasingly reduced towards the free end by the removal of material (51) and that a free space for movement is afforded for the common hinge (G) by the removal of material (51).

13. A fastening system according to claim 13 characterised in that the convex curvature (45) of the projection (44) and the concave curvature (55) of the opening (52) substantially form a portion of a circle, wherein the centre point (K) of the portion of the circle is on or beneath the top side of the projection (44).

14. A fastening system according to claim 13 or claim 14 characterised in that the furthest projecting point of the convex curvature (45) of the projection (44) of a panel is so arranged that it is somewhat below the upper edge (48) of the panel (40).

15. A fastening system according to one of claims 13 to 15 characterised in that the lower wall (53) of the opening (52) of a panel (41), which is towards the base (U), has on its inside an inclined removal of material (56) which extends to the free end of the lower wall (53) and the wall thickness of said wall (53) is increasingly thinner towards the free end, wherein a free space (57) for movement for the common hinge (G) is provided by the removal of material (56), in the laid condition of two panels (40, 41).

16. A fastening system according to one of claims 13 to 15 characterised in that the opening (52) of a panel (41) can be enlarged for connection to the projection (44) of a further panel (40) by resilient deformation of the lower wall (53) and the resilient deformation of the lower wall (53) which occurs during the joining operation is reversed again in the finished joined condition of two panels (40, 41).

17. A fastening system according to one of claims 1 to 8 characterised in that the positively engaging profiles (42, 43) are formed integrally at the narrow sides of the panels (40, 41).

18. A fastening system according to one of claims 1 to 9 characterised in that the panels (3, 4, 5, 6, 22, 23, 40, 41) substantially comprise an MDF, HDF or chipboard material.

19. A fastening system according to one of claims 1 to 10 characterised in that in the laid condition of the panels (3, 4, 5, 6, 22, 23, 40, 41) the free spaces (57, 58) for movement for the common hinges (G) are provided with a filler (60) which hardens in soft-elastic form.

Sub D3 > 20. A panel with a fastening system according to one of claims 1 to 19.